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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,848	07/18/2000	Yuji Nagatani	FAC-001	8622

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28 STATE STREET  
BOSTON, MA 02109

EXAMINER
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CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/618,848	<b>Applicant(s)</b> NAGATANI ET AL. <span style="float: right;">GA</span>	
	<b>Examiner</b> Jean B. Corrielus	<b>Art Unit</b> 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 5 is/are allowed.
- 6) ☒ Claim(s) 1, 4 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art fig. 1 in view of Coteus et al US patent No. 6,127,840.

Applicant's admitted prior art teaches a reception circuit for receiving signal represented by two AC components being opposite in phase and appearing in a communication system utilizing two-wire type transmission lines see fig. 1, comprising: an AC coupling circuit (15 and 16) for extracting said AC components from said transmission lines; two bias circuits (17 and 18) being independent from each other and each for applying a bias voltage to each of the AC components extracted by said AC coupling circuit (15 and 16). However, applicant's admitted prior art fails to teach "two clip circuits being independent from each other and each for clipping the level of each of the biased AC components at levels between a potential and a ground level". Coteus et al teaches two clamping circuits (clip circuits) 20 being independent from each other and each for clipping the level of each of the signal (biased AC components) on line 94 at levels between a potential and a ground level see col. 3, lines 23-50 and col. 4, lines 30-48. Given that fact, it would have been obvious to one skill in the art to incorporate

such a teaching in applicant's admitted prior art fig. 1 in order to avoid large power dissipation associated with conventional end-terminated signal lines see Coteus col. 1, lines 45-46 and 63-64.

***Claim Rejections - 35 USC § 103***

3. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minuth et al US Patent no. 6,396,282 in view of Lau US patent No. 5,896,417.

Minuth et al discloses a communication system utilizing two-wire transmission lines (H and L) see fig. 1 for transmitting a transmission signal, comprising: a plurality of nodes 1a-1f) respectively connected to said two-wire transmission lines (H and L) each of said nodes having two terminating resistors (Rtl and Rth) respectively connected to said transmission lines said terminating resistors comprising a first terminating resistor (RTL) for supplying a first predetermined potential (5V) (DC potential) see fig. 2 to one of said two-wire transmission lines (L and H) and a second terminating resistor (RTH) for supplying a second predetermined potential (Ground, or 0V) (DC potential) different from said first predetermined potential to the other of said two-wire transmission lines (H and L).

However, Minuth fails to teach a lowpass filter for connecting the terminating resistors to the transmission lines. Lau teaches fig. 1 low pass filter elements 18 for connecting terminating resistors to a transmission line 10. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Minuth et al so as to remove unwanted frequency components from the received/transmit signal as such

frequency components if not compensated for may create interference that would affect signal quality.

As per claim 6, note that it is well known in the art for a low pass filter to include a resistor coupled to the input terminal of the low pass filter and a capacitor connected across the other terminal and ground level. It would have been obvious to one skill in the art to implement the lowpass filter with the above components and the motivation to do so would have been the same as provided above with respect to claim 1.

### ***Response to Arguments***

4. Applicant's arguments filed 11/23/05 have been fully considered but they are not persuasive. It is alleged that it is alleged that the resistors taught by Lau are not equivalent to the terminating resistors recited in the claims. However, applicant does not provide a reason why the resistors taught by Lau are different from the resistors claimed. In addition, it is alleged that Lau does not teach the terminal resistors terminating at different potential are connected through a low pass filter. However, as noted in the last office action, the base reference to Minuth is shown to teach every feature of the claimed invention except for **a lowpass filter for connecting the terminating resistors** to the transmission lines. And Lau has been used to compensate for such a deficiencies. As clearly shown in fig. 1 of Lau teaches **a low pass filter element 18 is used for connecting terminating resistors to a transmission line 10**. As stated in the last office action, given the teaching of Lau, modifying the teaching of Minuth by connecting the resistors to the line through a low pass filter would have been in the

purview of one of ordinary skill in the art. See last office action. It is further alleged that Coteus teaches only a **single** transmission line rather than **two** transmission line couple to two independent clip circuits for clipping the level of each biased AC component at levels between a potential and ground level. However, it is noted fig. 4, shows a clip circuit 20 connected to a **first line 94** and a second clip circuit 20 connected to a **second line 94** in addition, at col. 3, lines 46-47, Coetus clearly teaches that the clip circuit are connected to clip between potentials 2V and a ground level potential 0V.

***Allowable Subject Matter***

5. Claims 3 and 5 are allowed.

***Conclusion***


6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jean B Corrielus  
Primary Examiner  
Art Unit 2637

1-6-06